

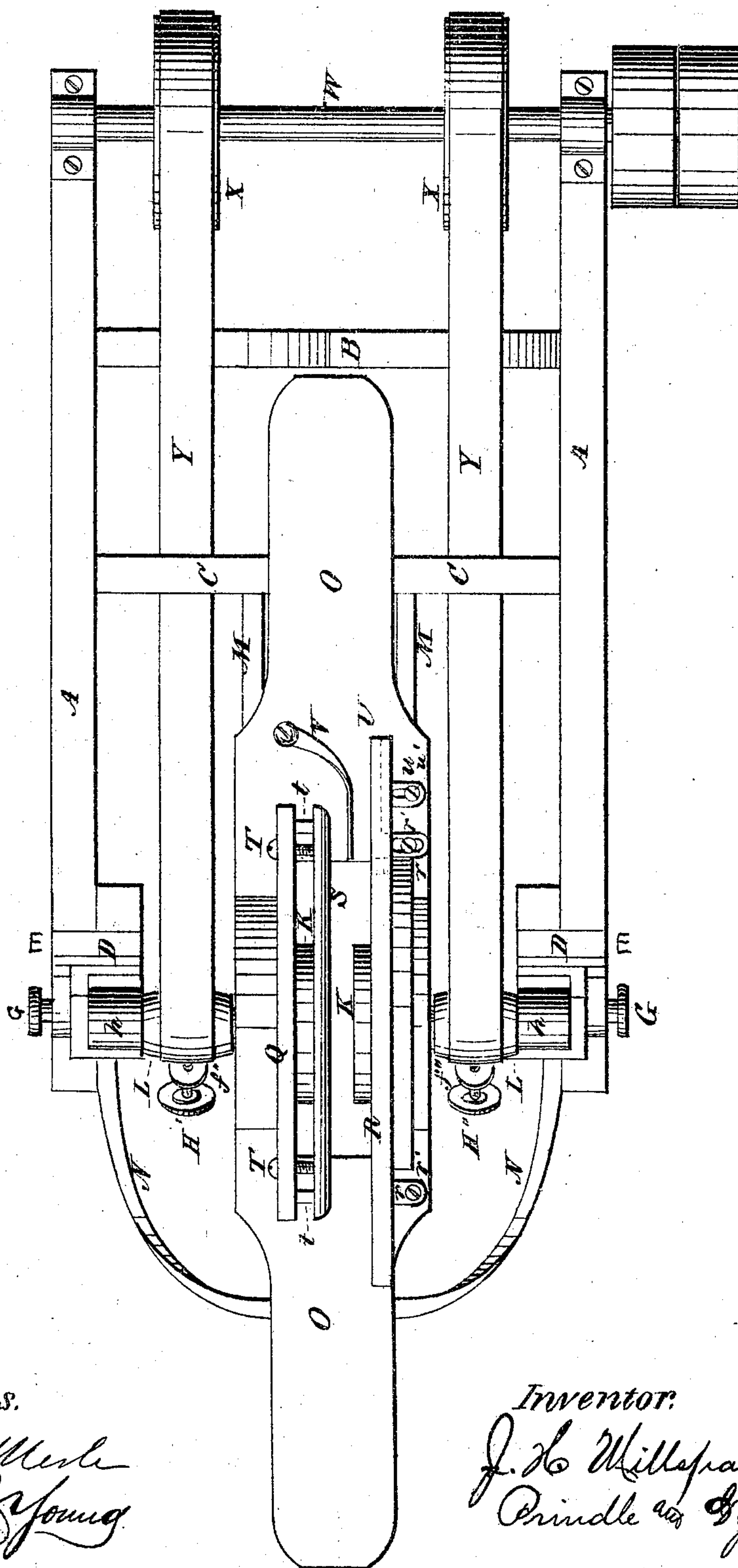
JOHN H. MILLSPAUGH.

Improvement in Panel Raising Machines.

No. 122,774.

Patented Jan. 16, 1872.

Fig. 1.



Witnesses.

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John R. Young

Inventor:

J. H. Millsprang, by
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Attys

(173.)

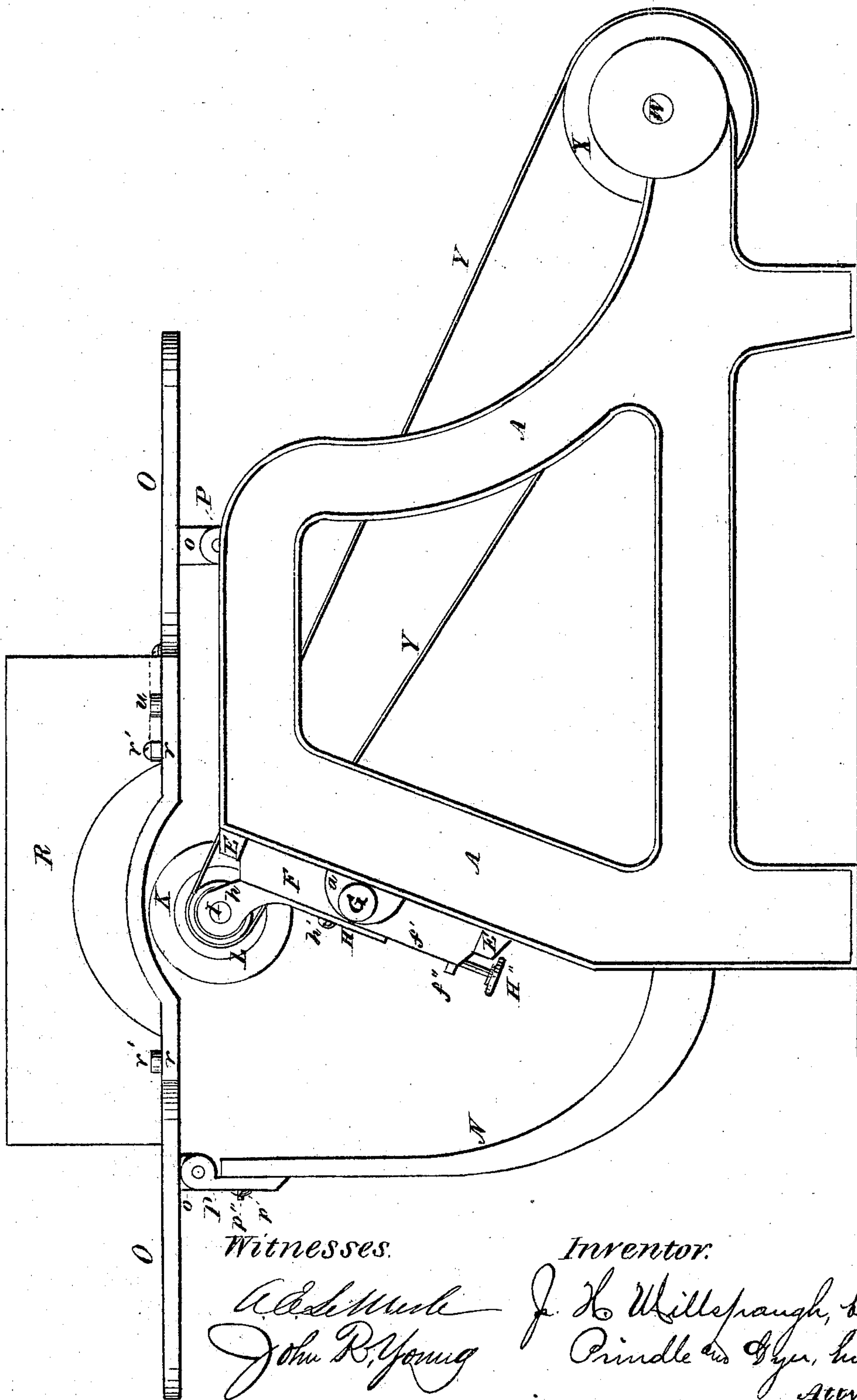
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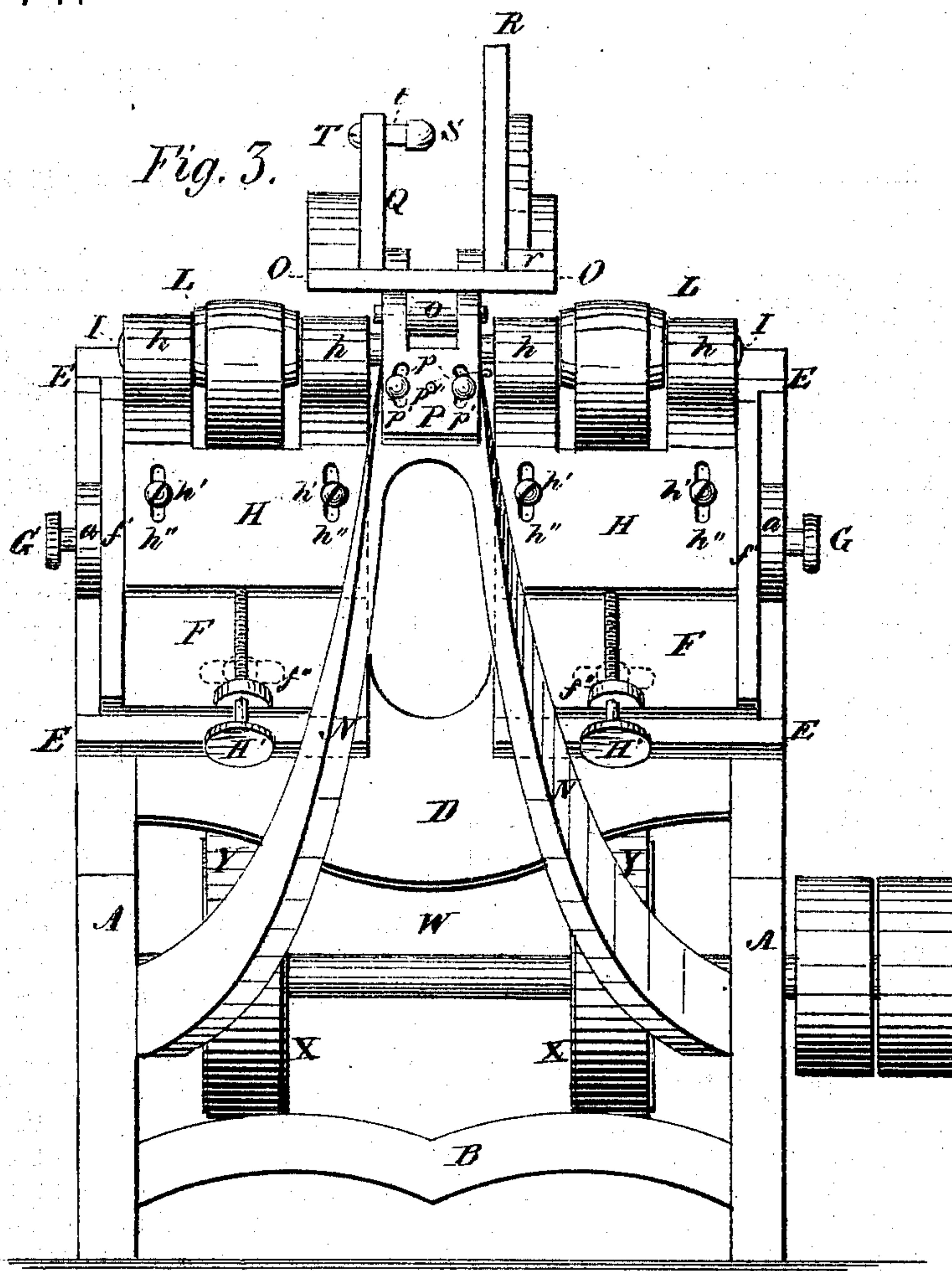
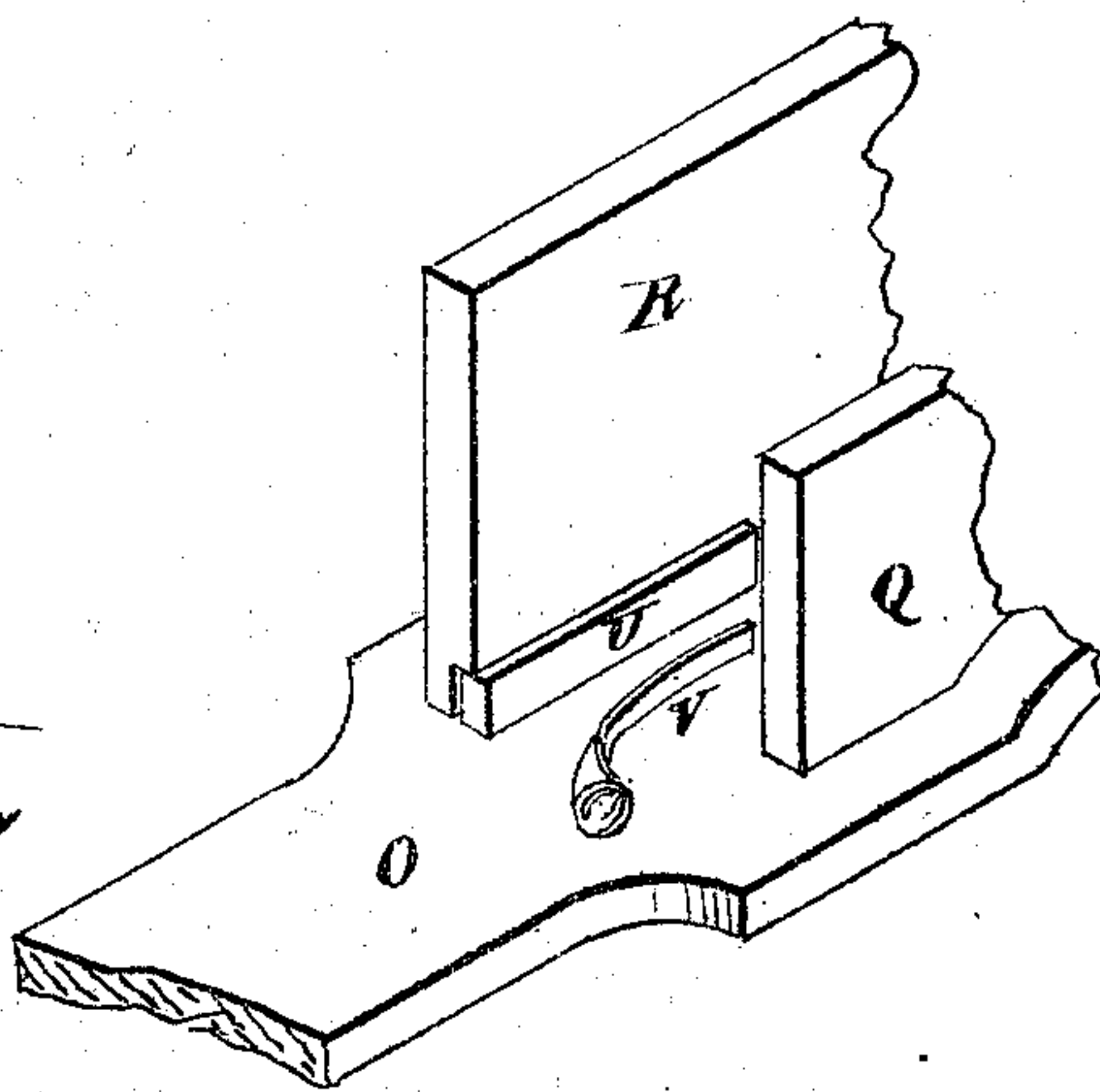
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*Fig. 4.*

Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN H. MILLSPAUGH, OF WILLIAMSPORT, PENNSYLVANIA, ASSIGNOR TO
MILLSPAUGH, ROWLEY & MILLSPAUGH, OF SAME PLACE.

IMPROVEMENT IN PANEL-RAISING MACHINES.

Specification forming part of Letters Patent No. 122,774, dated January 16, 1872.

To all whom it may concern:

Be it known that I, J. H. MILLSPAUGH, of Williamsport, in the county of Lycoming and in the State of Pennsylvania, have invented certain new and useful Improvements in Panel-Raising Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a plan view of the upper side of my improved device. Fig. 2 is a side elevation of the same. Fig. 3 is a front elevation of said machine, and Fig. 4 is an end elevation, showing perspective view of the device for confining and guiding the tongue of the panel while being operated upon.

Letters of like name and kind refer to like parts in each of the figures.

My invention belongs to a class of devices used for cutting rebates upon the edges of panels; and it consists in the means employed for rendering the cutter-heads independently adjustable; in the means employed for pivoting the supporting-table with reference to the cutter-heads; and in the means employed for confining and guiding the tongue of the panel when the same is being operated upon, all as more fully hereinafter set forth. It consists, finally, in the means employed for connecting the supporting-table to or with the frame, substantially as and for the purpose hereinafter shown and described.

In the annexed drawing, A represents one of the side pieces of the frame, constructed in the form shown in Fig. 2, and connected with a similar part by means of four cross-rails, two of which, B, are placed near the ends and bottom of said side pieces. The third, C, is placed at their upper sides and rear ends, while the fourth rail, D, extends between the forward ends of said parts from their upper sides to a point midway between the same and their lower sides. Extending horizontally across the face of the rail D, at its upper end and near its lower end, are two lugs, E, the inner faces of which are parallel, and form guides or ways for containing two cutter-carriages, F, which carriages are each held in position against the face of the frame by means of a bolt that passes outward through a horizontal slot in said frame,

with its outer threaded end fitted into a corresponding opening in said carriage. A lateral adjustment of the carriage within the ways and upon the frame is effected by means of a screw, G, one end of which is journaled within a lug, a, that is secured to and projects forward from the corner of said frame, while the opposite end of said screw fits into a threaded opening within said carriage. Extending forward from the vertical sides of each carriage F are two flanges, f', between which is fitted a slide, H, the upper end of which is bifurcated and extended forward so as to form two bearings, h, for the cutter-shaft I, which shaft is provided upon its inner end with a cutter-head, K, and upon its central portion, between said bearings, with a pulley, L. The slide H is held in position upon its carriage by means of two screws, h', which pass inward through suitable vertical slots h'' formed within said slide, and have their threaded ends fitted into corresponding threaded openings within said carriage. The slides H are arranged upon and in connection with the carriages F at such an angle that the belts which drive the cutter-shafts I will operate without taking up or letting out, whatever may be the vertical position of said shafts. A screw, H', journaled at one end within a lug, f'', that extends outward from the lower end of the carriage F, has its opposite threaded end fitted within a corresponding opening within the slide H, and furnishes a means whereby said slide may be adjusted up or down upon the carriage. The rail or frame-front D is provided with vertical slots which correspond in width and position to the pulleys L, and to the extreme outward positions of the cutter-heads K are open at their upper ends, and extend downward sufficiently to give all necessary clearance to the belts and cutters. Two braces, M, extending horizontally rearward from the upper ends of the divided portions of the frame-front D, are connected to or with the cross-rail C, and furnish the necessary support for said divided portions. Extending in a curve, forward, upward, and inward, from the lower side and front end of each frame side A is a brace, N, the upper ends of which unite and are nearly upon a level with the upper surface of the frame, and, in connection with the latter, furnish a support for the table O, which table is

connected therewith by means of the following-described devices: Attached to the lower side of the table, immediately over the upper end of the braces N and over the cross-rail C, is an ear, o, to which is hinged a plate, P, having the form shown in Figs. 2 and 3. The plates P are pivoted upon the forward faces of said braces and rail, and are each secured in place by means of two set-screws, *p*, that pass inward through two semicircular slots, *p'*, with their inner threaded ends fitted into the part immediately beneath. By loosening the set-screws the plates and table may be turned toward either side so as to change the angle of the upper side of said table with reference to the faces of the cutter-heads. By removing either of the hinge-pins *p''* the corresponding end of the table may be raised so as to afford access to the mechanism beneath. Secured to and extending upward from opposite sides of the table O are two vertical plates, Q and R, the latter of which is held in place by means of two horizontal and lateral slotted lugs, *r*, through which suitable set-screws *r'* pass downward into said table, whereby said plate is made adjustable to or from the plate, Q. As the work, while being operated upon, is to rest against the plate R the plate Q is provided with a presser-bar, S, which is loosely connected therewith by means of two bolts, T, that slide freely through suitable openings in said plate with their heads bearing against the outer face of the same and their threaded ends fitted into corresponding threaded openings in said bar. A rubber or other suitable spring, *t*, placed between each end of the presser-bar and the contiguous face of the plate Q, holds said bar outward as far as permitted by its bolts, except when a panel is passed through the machine, in which event said springs will yield so as to give room between said bar and the plate R while, at the same time, pressing said panel firmly against the latter. It being desirable that the tongue of the panel should be supported immediately after it leaves the cutters, a slide, U, is fitted into a corresponding recess formed within the lower edge and rear end of the plate R, and made adjustable toward or from the panel by means of a slotted lug, *u*, which extends laterally outward over the table, and contains a set-screw, *u'*. The slide, thus constructed and arranged, is adjusted outward until it bears lightly upon the corresponding side of the tongue, while the opposite side of the latter is held in place by means of a spring, V, that is secured at one end to the table and with its opposite end bears against said tongue. A driving-shaft, W, journaled within bearings formed by the rear ends of the side plates A, and provided with suitable pulleys X that are connected with the pulleys L

by means of belts Y, completes the device, the operation of which is as follows: The cutter-heads are adjusted toward or from each other until the space between their cutters exactly equals the desired thickness of the tongue, after which said heads are adjusted to such vertical position with reference to the upper surface of the table as to cause the cutters of each to project above the same to a distance equal to the proposed width of said tongue. The several adjustable parts being secured in place the cutter-shafts are caused to revolve and the panel passed through in the usual manner until its end comes opposite the adjustable slide U, which is then set in position so as to support the tongue, after which the machine is ready for continued operation.

The advantages obtained by this construction of the machine are: First, the cutter-heads can be quickly and easily adjusted so as to cut a tongue having any desired thickness or width upon either side, while in machines commonly used these results are only effected by a change of cutters. Second, the supporting-table may be readily adjusted to any desired angle with reference to the faces of the cutter-heads, by which means the sides of the tongues may be in a line with or at an angle to the sides of the panel. Third, the means employed for connecting the table to or with the frame renders easy the detachment and removal of either end so as to uncover the mechanism beneath and afford easy access to the same. Fourth, the adjustable slide and spring for holding the panel-tongue in position are simple in construction and efficient in operation.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. The combination of the shafts I carrying the cutter-heads K, the adjustable slides H, upon the top of which said shafts are journaled, and the carriages F, substantially as described, with the table O, for the purposes set forth.

2. The combination of the frame with the supporting-table O, the pivoted plates P provided with semicircular slots *p'*, set-screws *p*, and pins *p''*, constructed and arranged substantially as described and shown, for the purposes set forth.

3. In combination with the plate or fence R, the adjustable slide U and spring V, constructed, arranged, and operating substantially as described and shown, for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this day of October, 1871.

JOHN H. MILLSPAUGH.

Witnesses:

J. A. BELTER,
HENRY A. HALL.

(173)