A. M. MORTIMER.

WOOD PLANING-MACHINE.

No. 182,846. Patented Oct. 3, 1876.

Fig. 1

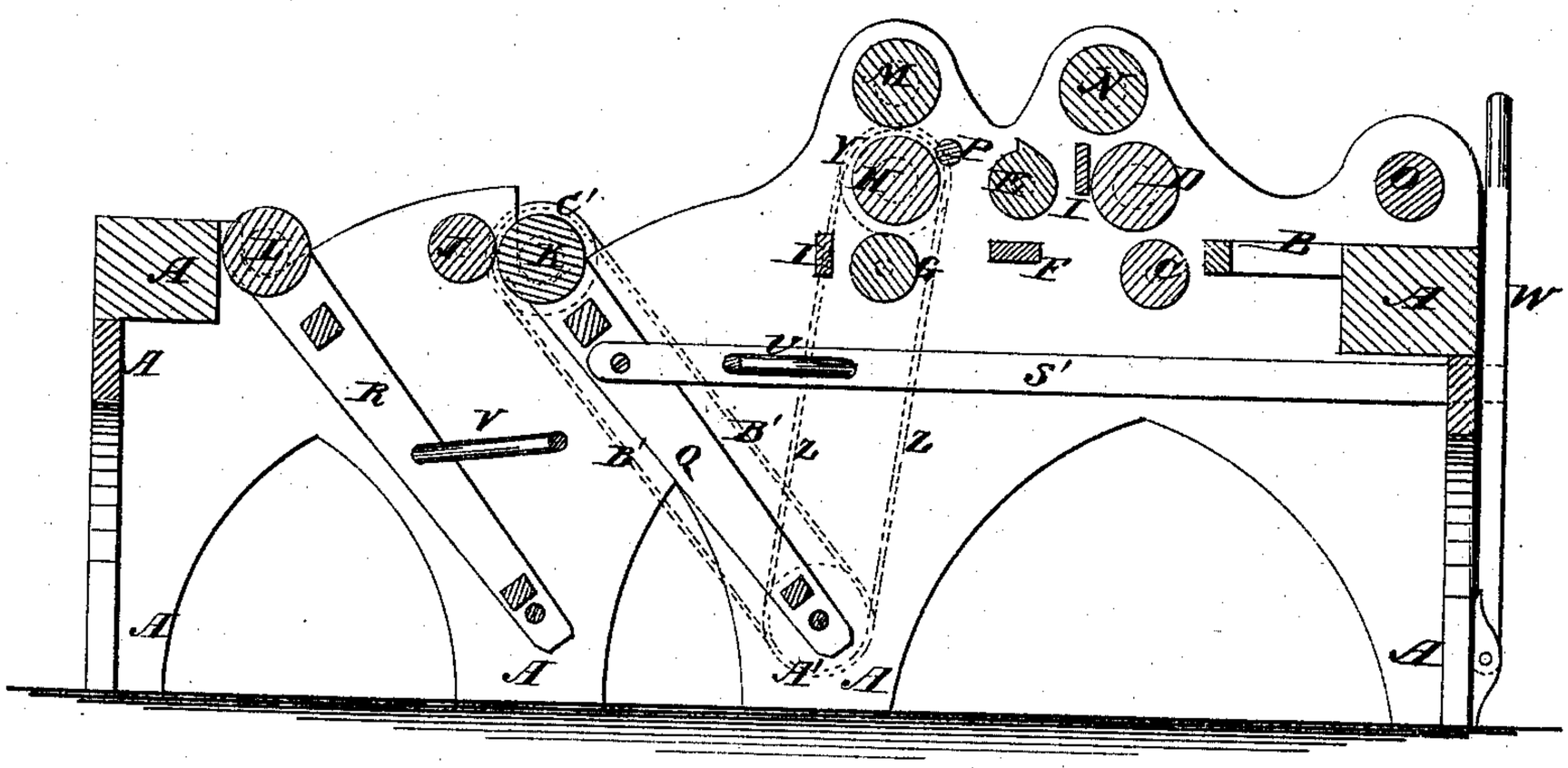
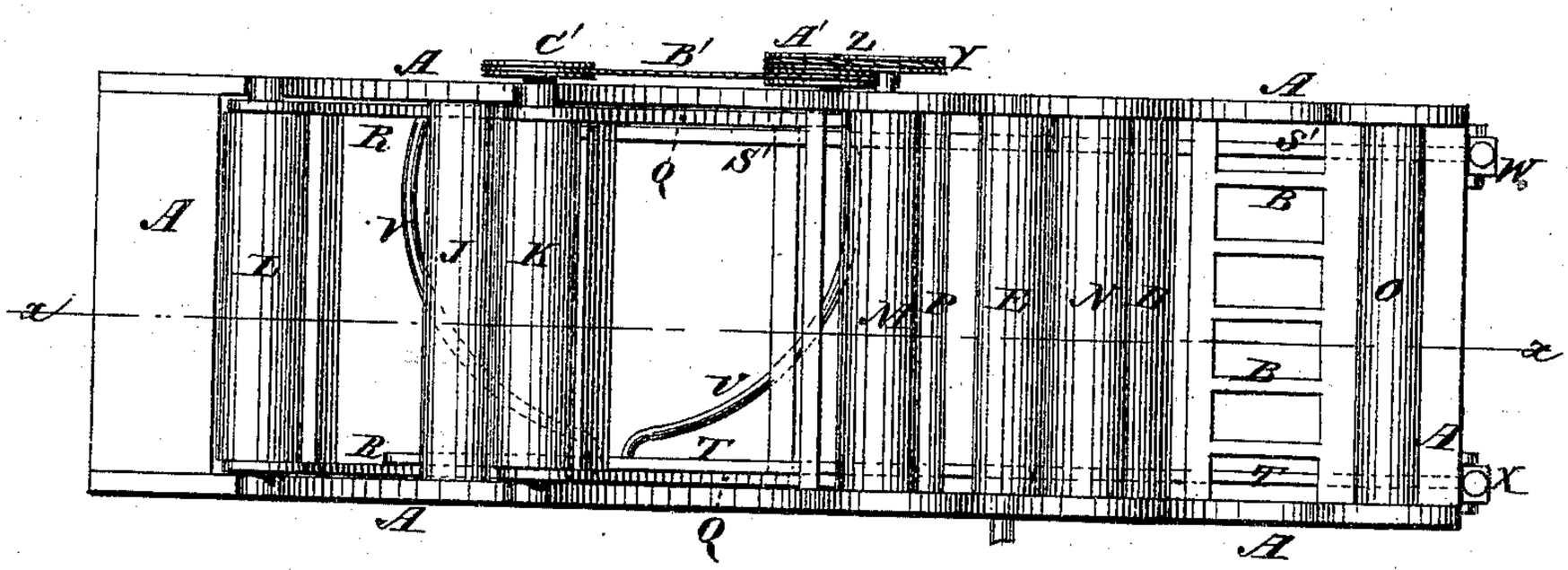


Fig. 2



WITNESSES:

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UNITED STATES PATENT OFFICE.

ANDREW M. MORTIMER, OF SALT LAKE CITY, UTAH TERRITORY.

IMPROVEMENT IN WOOD-PLANING MACHINES.

Specification forming part of Letters Patent No. **182,846,** dated October 3, 1876; application filed August 14, 1876.

To all whom it may concern:

Be it known that I, ANDREW M. MORTIMER, of Salt Lake City, in the county of Salt Lake and Territory of Utah, have invented a new and useful Improvement in Wood-Planing Machines, of which the following is a specification:

Figure 1 is a vertical longitudinal section of my improved machine taken through the line *x x*, Fig. 2. Fig. 2 is a top view of the same.

Similar letters of reference indicate corresponding parts.

The object of this invention is to improve the construction of wood-planing machines in such a way that a board, after being passed through the machine and being planed upon one side, may be raised by mechanism passed back or returned through the machine and planed upon the other side.

The invention consists in the combination of the rollers, the pivoted frames, the connecting-bars, and the levers, with the frame of a planer for raising the boards from the forward feed-rollers to the return feed-rollers of said planer; in the combination of the upper or return feed-rollers with the ordinary feed-rollers for returning the board above the cutter-head; in the combination of the small roller with the feed-rollers of the planer for raising the returning board out of the sweep of the cutters; and in the combination of the receiving-roller with the frame and the feed-table of the planer to receive the board as it is returned, as hereinafter fully described.

A is the frame of the machine. B is the table from which the board is fed to the rear feed-rollers C D, the upper one, D, of which is adjustable, and by which the board is fed forward to the cutter-head E. The board, while being planed, rests upon the bed F placed beneath the cutter-head E. As the board passes the cutter-head E it is received and carried forward by the forward feed-rollers G H. In front of the rollers D and G are placed the chip-guards I. As the board passes out in front it is received upon the roller J, pivoted to the frame A.

As the rear end of the board passes out from between the rollers G H the two rollers K L are raised, which raises the board, so that it can pass in between the rollers H M. The rear roller K is toothed, so that it may feed the board back to the rollers H M, and should be lowered out of the way as soon as the board has been grasped by the rollers H M, the roller L being lowered as soon as the board leaves it. As the board passes back between the rollers H M its lower side is planed by the cutters E, and its end, as it passes said cutters, is grasped by the feed-rollers D N. As the board passes back from the rollers D N it is received upon the roller O pivoted to the rear part of the frame A, and which is made of such a size as not to interfere with the ordinary working of the machine. P is a small adjustable roller placed a little in the rear of the roller H, and, which, when it is desired to pass the board back without planing its lower side, is raised to raise the said board above the sweep of the cutters E. The rollers K L are pivoted to the upper ends of two frames, Q R, the lower ends of which are pivoted to the lower part of the frame A. To the frames Q R are pivoted, respectively, the connecting-bars S T, which are farther connected with said frames Q R by the braces U V, so that the said frames may be raised squarely. The rear ends of the connecting-bars S T are pivoted to the levers W X, the lower ends of which are pivoted to the lower part of the rear end of the frame A, so that the attendant can easily reach and operate them to raise and lower the rollers K L, as required.

To the journal of the forward feed-roller H is attached a pulley, Y, around which passes a band, Z, which also passes around a pulley, A′, attached to the pivot of the frame Q that carries the rear roller K. Around the pulley A′ passes a band, B′, which also passes around a pulley, C′, attached to the journal of the rear or toothed roller K. By this arrangement the band B′ will have the same tension however the roller K may be adjusted.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of the rollers K L, the pivoted frames Q *k*, the connecting-bars S T, and the levers W X, with the frame A, of a planer for raising the boards from the forward

feed-rollers to the return feed-rollers of said planer, substantially as herein shown and described.

2. The combination of the feed-rollers M N with the ordinary feed-rollers H G and D C, for returning the board above the cutter-head F, substantially as herein shown and described.

3. The combination of the small roller P, with the feed-rollers H M and D N, for raising the returning board out of the sweep of the cutters, substantially as herein shown and described.

4. The combination of the receiving-roller O with the frame A and the feed-table B, of the planer to receive the board as it is returned, substantially as herein shown and described.

ANDREW M. MORTIMER.

Witnesses:

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MORGAN REED.